

Wisconsin Valley Improvement Company

WWIC Overview and Burnt Rollways Dam

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COMPANY PURPOSE

- **PROVIDE UNIFORM FLOW ON THE WISCONSIN RIVER**
- **COORDINATE DAM OPERATIONS ALONG THE RIVER**

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METHOD

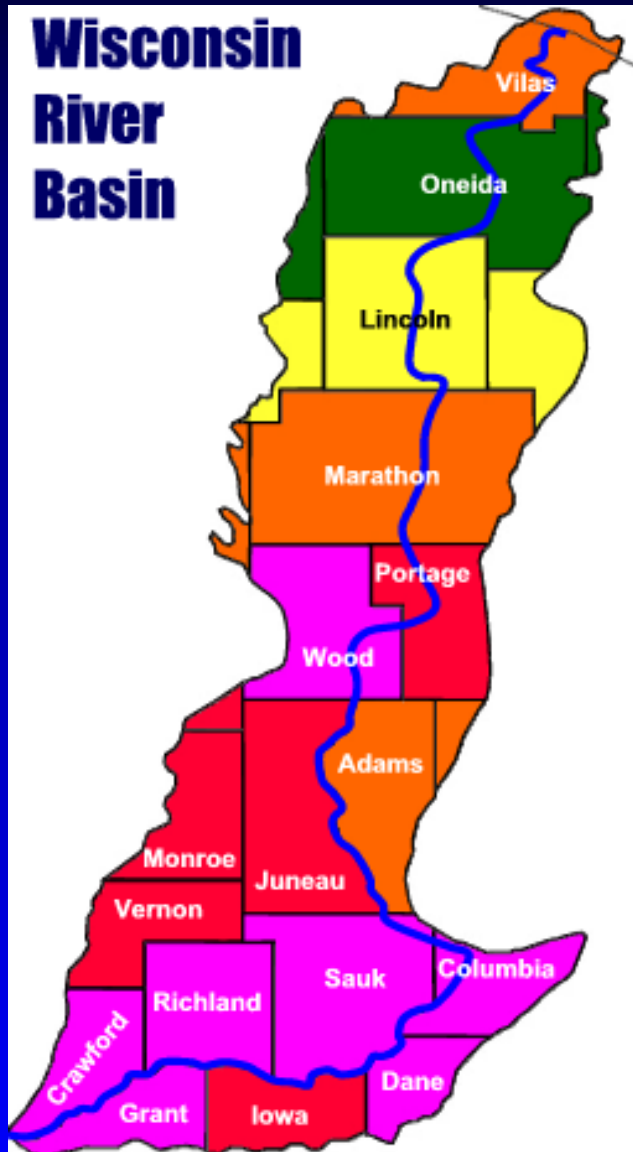
- **OWN AND OPERATE 21 WATER STORAGE RESERVOIRS**
- **STORE WATER DURING HIGH-FLOW PERIODS**
- **RELEASE WATER DURING LOW-FLOW PERIODS**
- **MAINTAIN COMMUNICATIONS NETWORK WITH HYDROPLANT OPERATORS**

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ORGANIZATION

- **PRIVATE CORPORATION**
- **OWNED BY WISCONSIN RIVER HYDROPLANT OWNERS**
 - **PAPER MILLS**
 - **UTILITIES**
- **FUNDED BY HYDROPLANT OWNERS**
- **REGULATED BY FERC, WDNR, PSCW, OTHERS**
- **UNIQUE, NORMALLY GOVERNMENT FUNCTION**

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WISCONSIN RIVER

- **LARGEST RIVER IN STATE**
- **430 MILES LONG**
- **1,050-FT FALL**
- **12,000 MI² DRAINAGE AREA**
- **90+ TRIBUTARIES**
- **AVERAGE FLOW**
 - **5 CFS AT SOURCE**
 - **12,000 CFS AT MOUTH**

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River Developments

- **21 Reservoirs**
 - **Owned and Operated by WVIC**
 - **5 Large Man-Made Reservoirs**
 - **Rainbow, Willow, Rice (Nokomis), Spirit, Eau Pleine**
 - **75% of storage**
 - **16 Natural-lake Reservoirs**
 - **Include Burnt Rollways (3 Lakes Chain)**

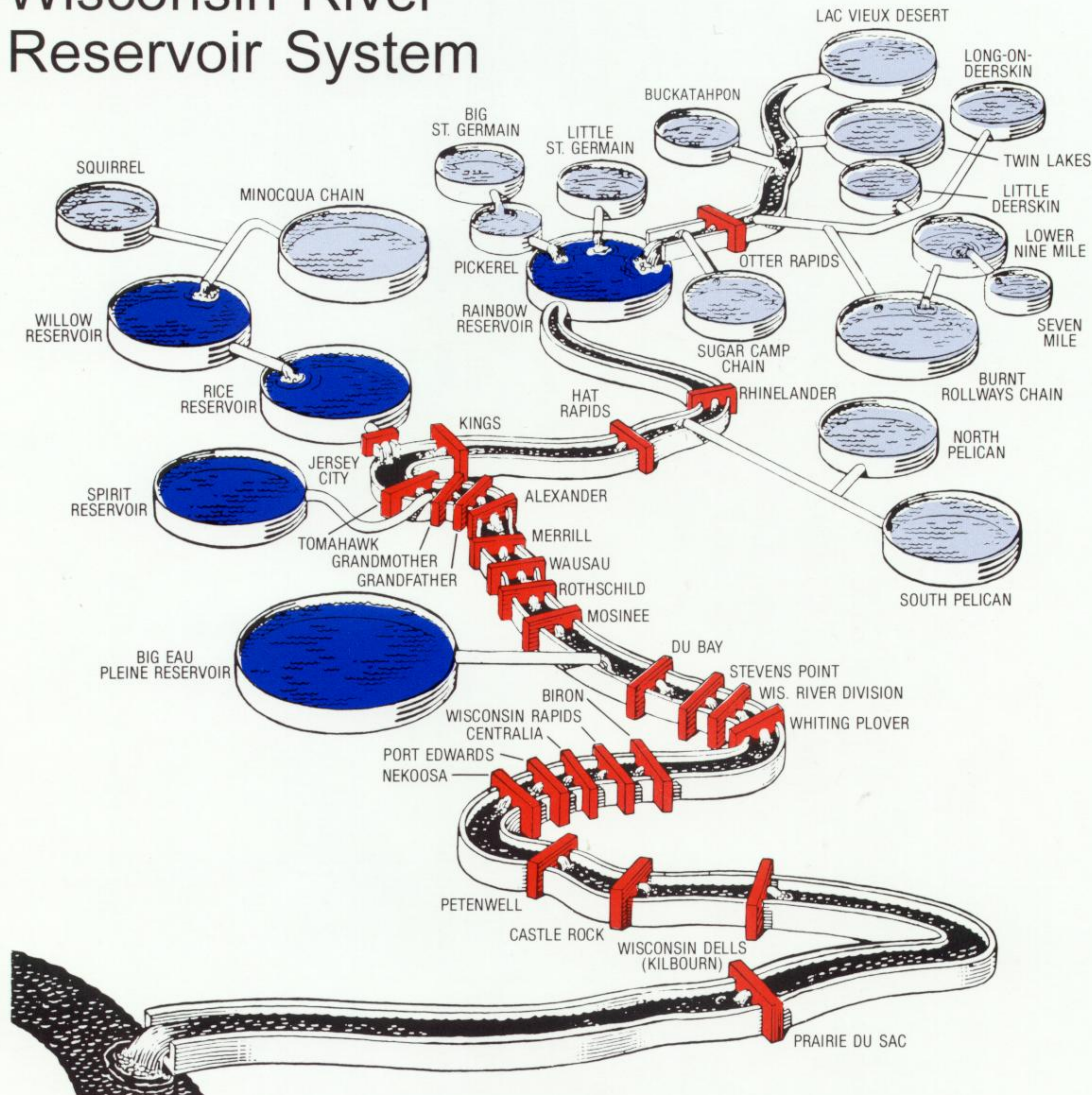
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River Developments

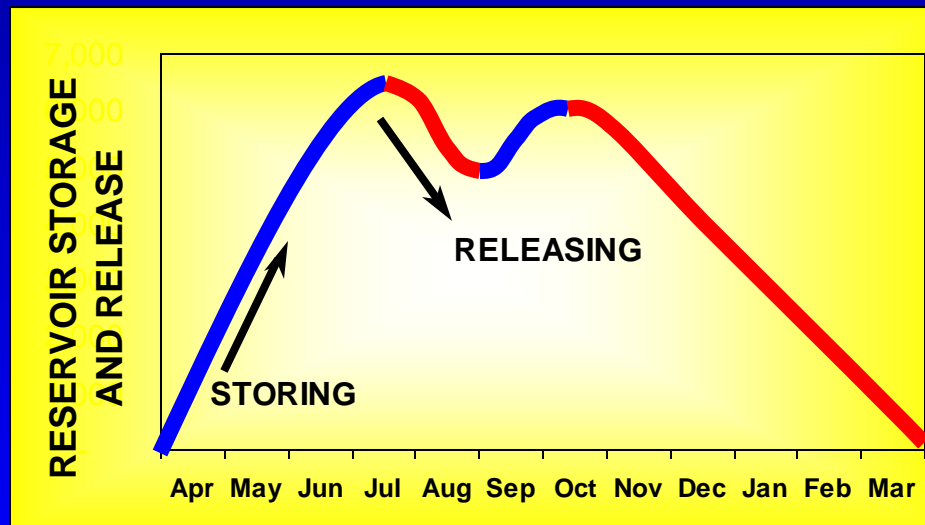
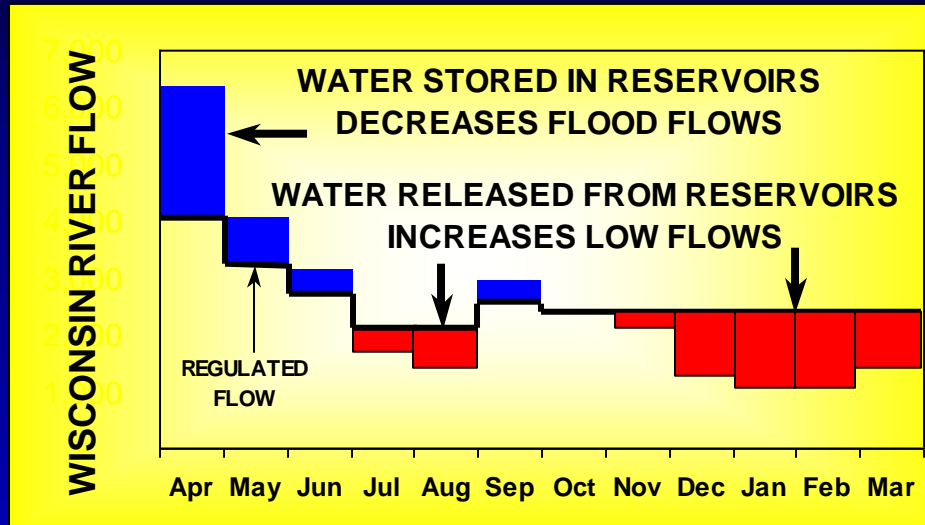
- **25 Hydroelectric Dams**
 - **Owned and Operated by WVIC Owner Companies**
 - **Provide electric power for**
 - **Paper production**
 - **Utility customers**

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Wisconsin River Reservoir System

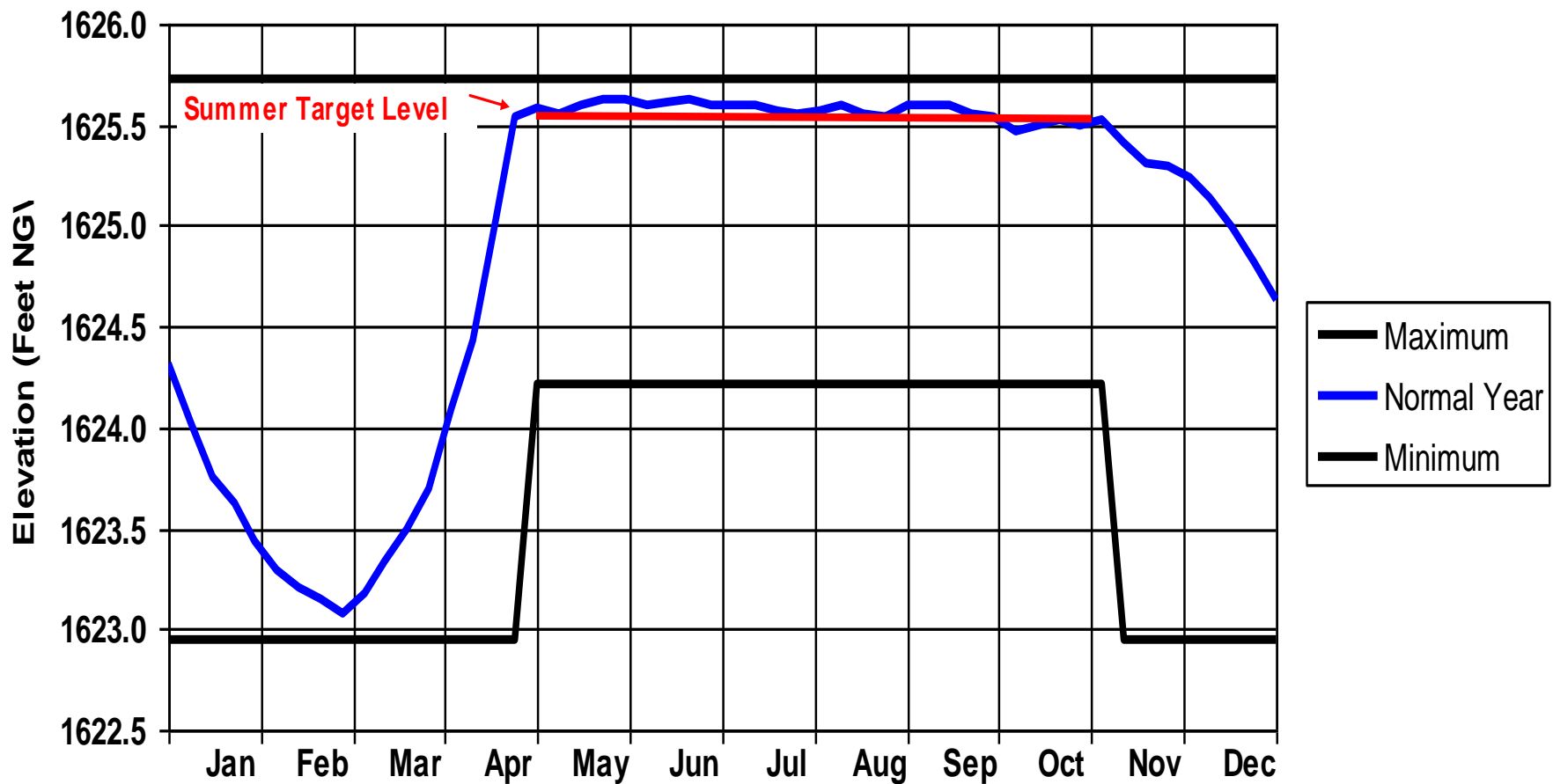


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Burnt Rollways Water Levels



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BENEFITS

- **INCREASED HYDROPOWER PRODUCTION**
 - **150 MWH/YEAR**
 - **SERVE 75,000 PEOPLE**
 - **CLEAN & RENEWABLE**
- **FLOOD CONTROL**
 - **REDUCE PEAKS BY 20-30%**
 - **DECREASED FLOOD DAMAGE**

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BENEFITS

- **IMPROVED WISCONSIN RIVER WATER QUALITY**
 - **HIGHER FLOW -> HIGHER DISSOLVED OXYGEN**
- **RECREATION**
 - **RESERVOIRS ADD 25,000 ACRES OF WATER**
 - **UNIFORM FLOW -> MORE RIVER USE**

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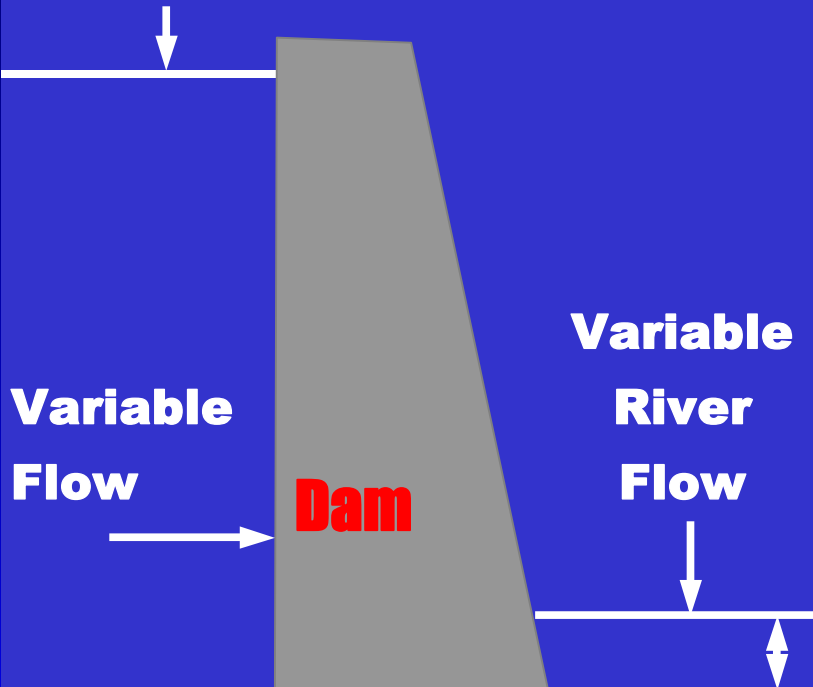
Question Number 1

- **Why is the Eagle River Chain water level normal and the Three Lakes Chain water level is low?**
 - **Burnt Rollways Dam is a Reservoir Dam**
 - **Winter drawdown for spring flood control**
 - **Otter Rapids Dam is a Hydropower Dam**
 - **No winter drawdown**

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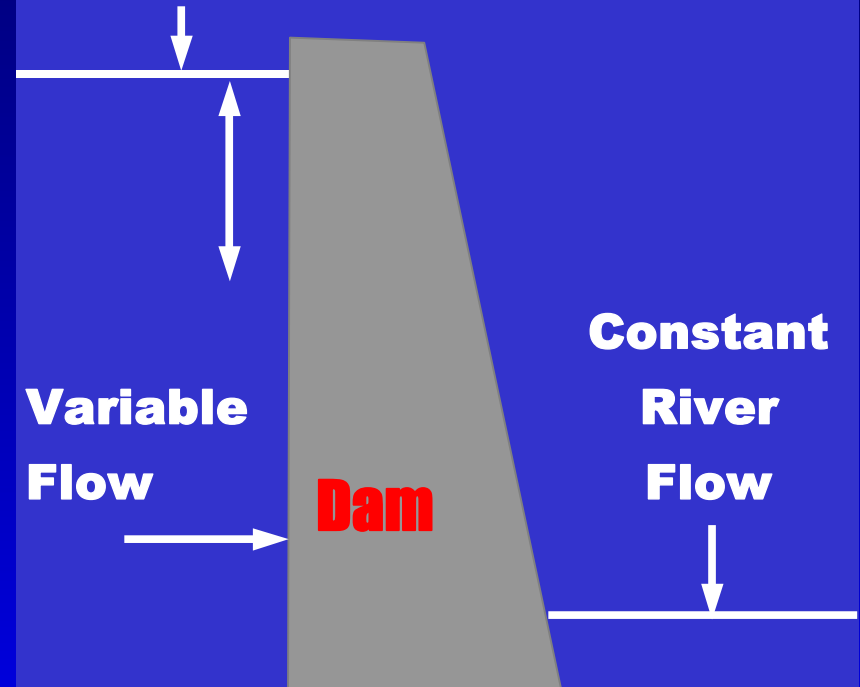
HYDROELECTRIC DAM

Constant Lake Level



RESERVOIR DAM

Variable Lake Level



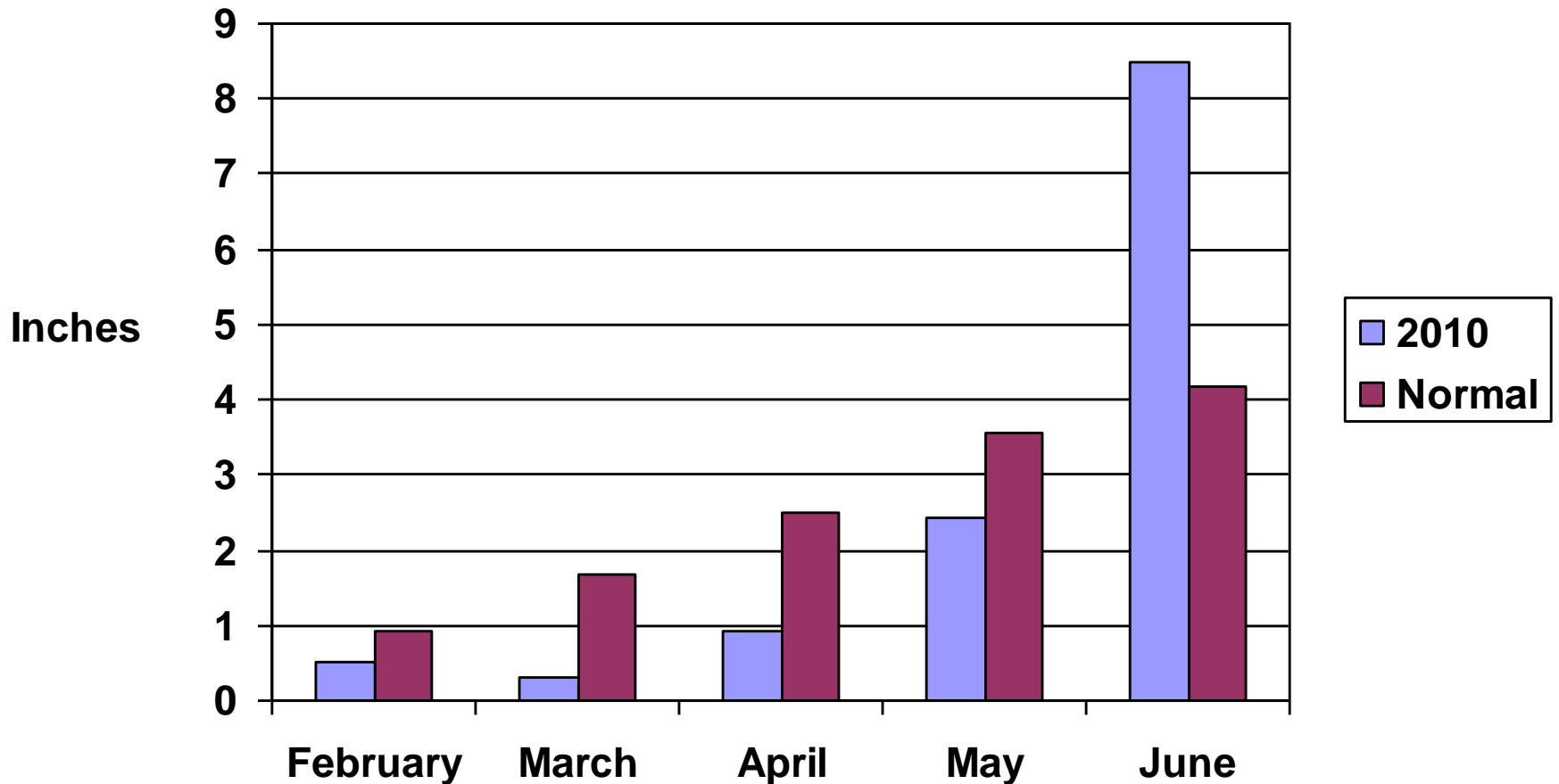
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Question Number 2

- **Why was the Three Lakes Chain water level so low this year?**
 - **Northern Wisconsin is suffering the worst drought in recorded history.**
 - **Over the last 7 years Vilas County was 40+ inches short on rain.**
 - **Spring rainfall in 2010 was very low**
 - **Spring refill depends on spring rain**

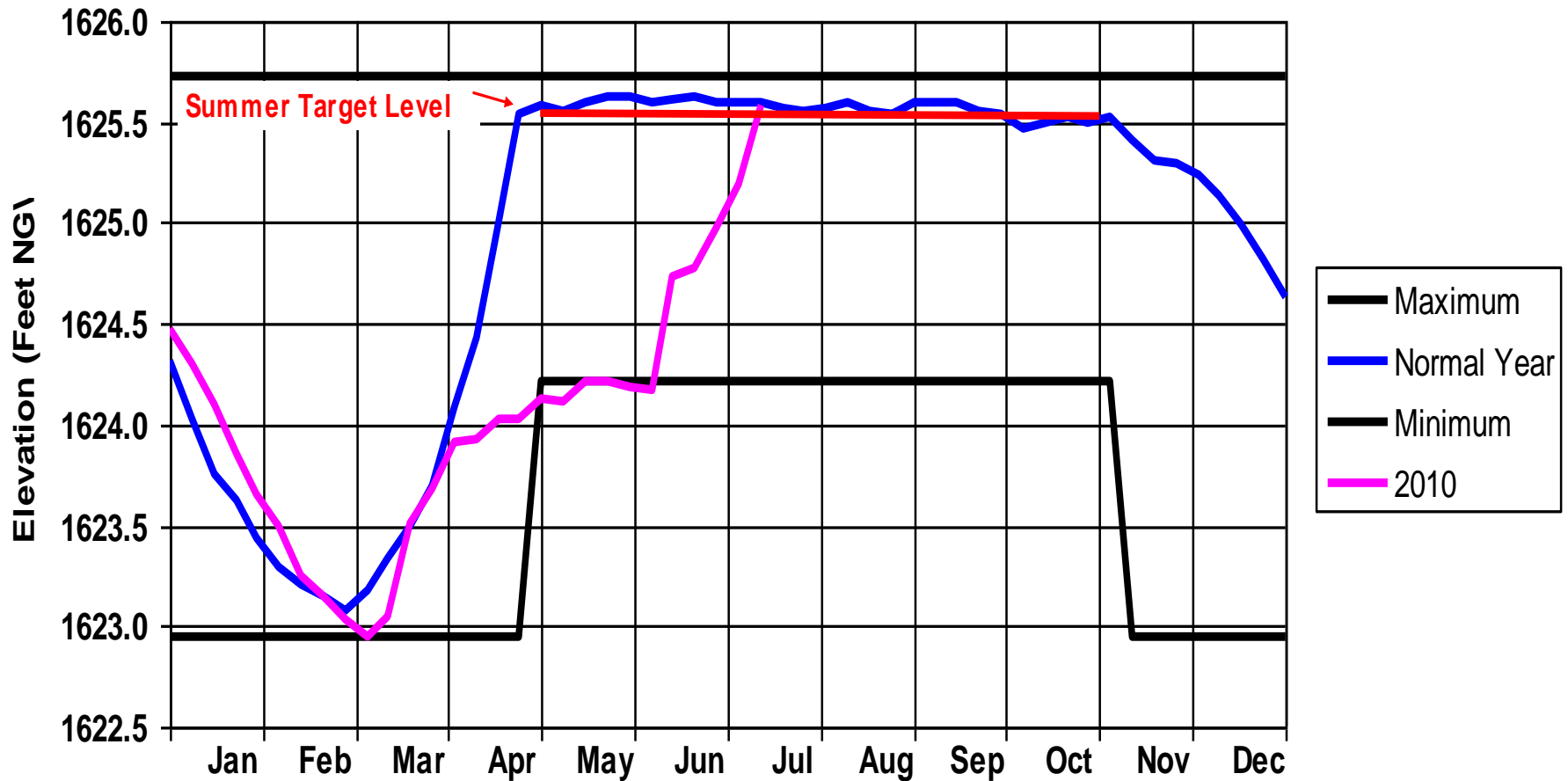
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2010 Precipitation



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Burnt Rollways Water Levels



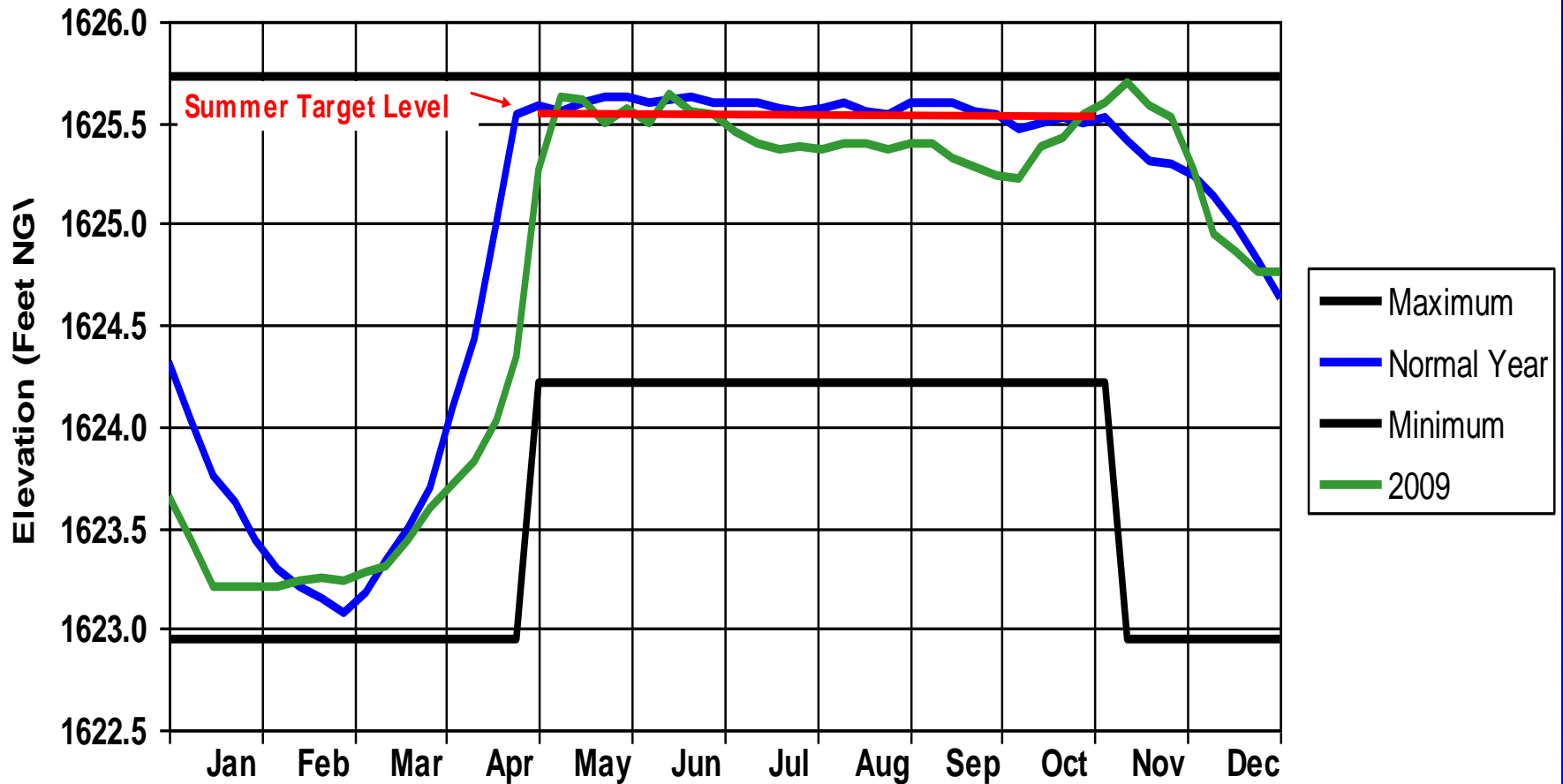
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Question Number 3

- **Why was the Three Lakes Chain water level normal last year – it was dry then too?**
 - **Spring refill depends on spring rain**
 - **Spring rainfall in 2009 was slightly above normal and timely (rain fell when the ground was still wet from snowmelt)**

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Burnt Rollways Water Levels



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Question Number 4

- **Why doesn't WVIC close the gate at the dam completely?**
 - **License for the dam requires WVIC to keep the gate open 1" (Minimum Flow Requirement)**
 - **Amount of water release by the 1" gate is very small.**
 - **On a sunny summer day, 7 times more water evaporates from the lake than leaves through the dam at the 1" opening**

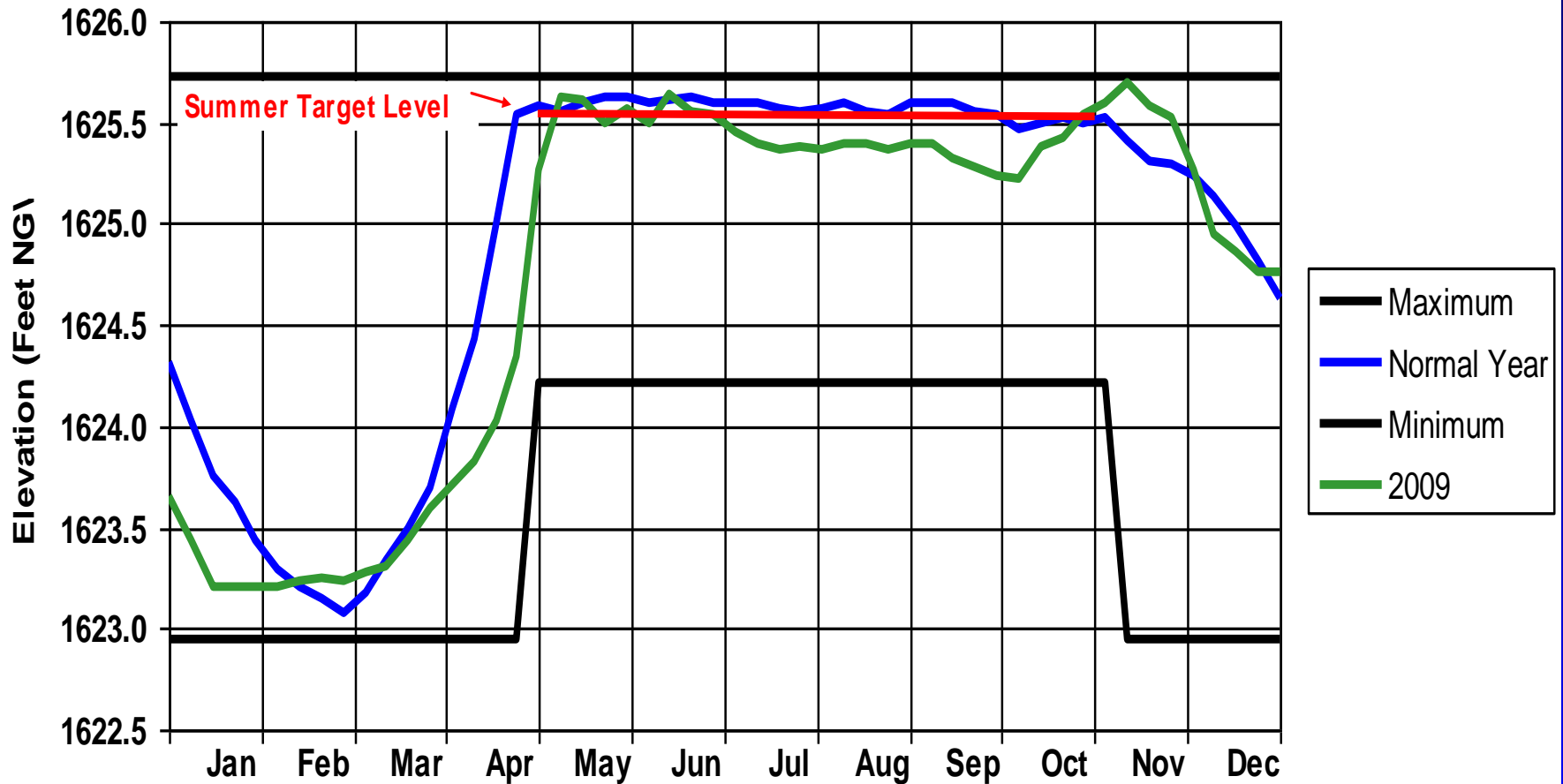
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Question Number 5

- **Will WVIC lower the water level this summer?**
 - **Not intentionally**
 - **The operating goal during the summer is to keep the water level at the Summer Target Level.**
 - **However, the water level could fall several inches if dry conditions return**

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Burnt Rollways Water Levels



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**THANK YOU
QUESTIONS?**